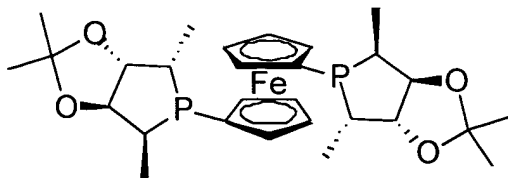


35. (Amended) A catalyst according to claim 23, wherein said chiral compound is represented by the following formula:



24 f-ketalPhos

REMARKS

Attached hereto is a marked-up version of the changes made to the claims by the current amendments. The attached pages are captioned "**Version with Markings to Show Changes Made.**"

Claims 23-35 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

Applicant has amended claim 23 by introducing the definitions for A, A', B, B', C, C', D and D'.

Support for the definitions is found on page 3 of the specification and in claim 1, which has been withdrawn from prosecution due to a restriction requirement.

Accordingly, claim 23, and claims depending therefrom, are allowable.

Claims 34 and 35 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

Applicant has amended claim 23 by removing the expression "derived from." Accordingly, claims 34 and 35 are allowable.

Claims 23-34 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Drent et al. (EP 0 501 586 A2).

Applicant has amended claims 23, 34 and 35 by introducing the term "chiral." None of the compounds described Drent et al. are chiral.

Accordingly, claims 23, 24-33 which depend directly or indirectly from claim 23, as well as claims 34 and 35 are allowable.

Claims 23-34 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Sturmer et al. (U.S. Patent No. 6, 043,396). *Anticipated A and C when modified.*

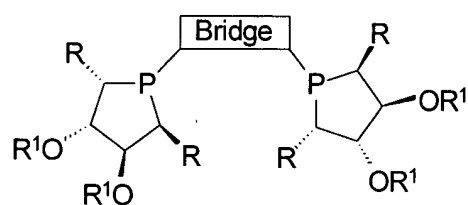
The Examiner has pointed to column 2, lines 51-55, the Examples and the claims as containing the disclosure that allegedly anticipates the instant claims.

Applicant has reviewed the Sturmer et al. patent and is unable to locate any of the instantly claimed catalysts.

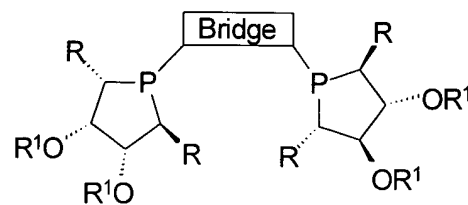
None of the claims of the Sturmer et al. patent disclose or suggest the instantly claimed catalysts. Furthermore, none of the examples describe any of the instantly claimed catalysts.

Based on the foregoing, applicant respectfully requests that the Examiner point out where in the Sturmer et al. patent describes any of the instantly claimed catalysts, which are defined as being:

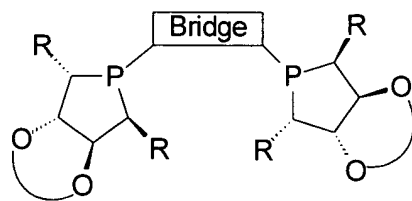
" A catalyst comprising a chiral compound in the form of a complex with a transition metal wherein said compound is selected from compounds represented by the formula:



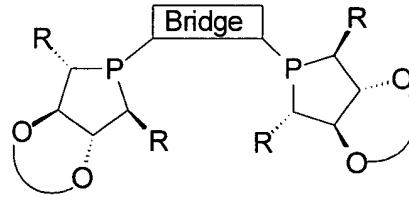
A



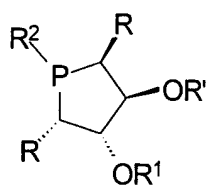
A'



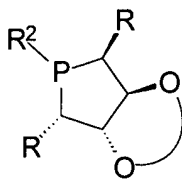
B



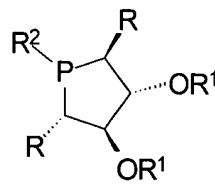
B'



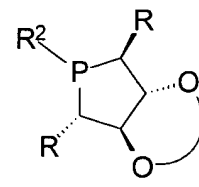
C



D



C'



D'

wherein:

- a) R and R² are independently aryl, alkyl, alkyl aryl, aryl alkyl, or chiral oxazolino which may be substituted with carboxylic acid, alkoxy, hydroxy, alkylthio, thiol or dialkylamino groups;
- b) R¹ can be H, alkyl, silane, aryl, a water soluble unit, or a linked polymer chain or inorganic support; and

c)

Bridge

 may be:

$-(CH_2)_n-$ where n is an integer ranging from 1 to 8;

$-(CH_2)_nX(CH_2)_m-$ wherein n and m are each integers, the same or different, ranging from 1 to 8, and X is O, S, NR⁴, PR⁴, AsR⁴, SbR⁴, divalent aryl, divalent fused aryl, divalent 5-membered ring heterocyclic group, or divalent fused heterocyclic group, wherein R⁴ is aryl, alkyl, substituted aryl, or substituted alkyl; or

1,2-divalent phenyl, 2,2'-divalent 1,1'-biphenyl or 2,2'-divalent 1,2'-binaphthyl or ferrocene, each of which may be substituted with aryl, C1-C8 alkyl, F, Cl, Br, I, COOR⁵, SO₃R⁵, PO₃R⁵₂, OR⁵, SR⁵, NR⁵₂, PR⁵₂, AsR⁵₂, or SbR⁵₂;

wherein the substitution on 1,2-divalent phenyl, the ferrocene or biaryl bridge can be independently halogen, alkyl, alkoxy, aryl, aryloxy, nitro, amino, vinyl, substituted vinyl, alkynyl, or sulfonic acids; and

R⁵ is hydrogen, C1-C8 alkyl, C1-C8 fluoroalkyl, or C1-C8 perfluoroalkyl, aryl; substituted aryl; arylalkyl; ring-substituted arylalkyl; or $-CR^3_2(CR^3_2)_qX(CR^3_2)_pR^1$ wherein q and p are integers, the same or different, ranging from 1 to 8; R³ is aryl, alkyl, substituted aryl, or substituted alkyl; and X is as defined above."

Claims 23-34 have been rejected under 35 U.S.C. § 103(a) as being over Brunner et al. publication.

Compounds described by Brunner et al. publication have diphenylphosphino groups on the bridge. Amended claim 23 does not have any diphenylphosphino groups on the bridge.

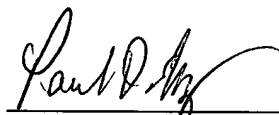
There is no teaching or suggestion in Brunner et al. publication to modify its compounds to produce the instantly claimed compounds, which do not have any diphenylphosphino groups on the bridge. Accordingly, claims 23 and 24-35, which depend directly or indirectly from claim 23, are allowable.

In view of the foregoing, Applicant respectfully requests reconsideration and allowance of all pending claims.

Respectfully submitted,

Date: April 28, 2003

By:



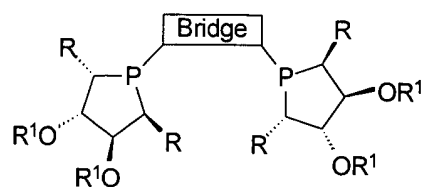
Paul D. Greeley
Reg. No. 31,019
Attorney for Applicant
Ohlandt, Greeley, Ruggiero
& Perle, L.L.P.
One Landmark Square, 10th Floor
Stamford CT 06901-2682
Tel: 203-327-4500
Fax: 203-327-6401

VERSION WITH MARKINGS TO SHOW CHANGES MADE

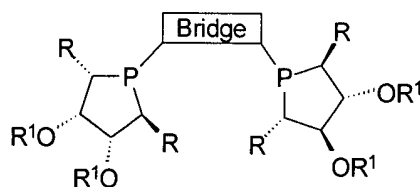
This application was amended as follows:

IN THE CLAIMS:

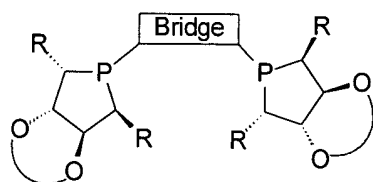
23. (Amended) A catalyst comprising a chiral compound in the form of a complex with a transition metal wherein said compound is selected from compounds represented by the formula:



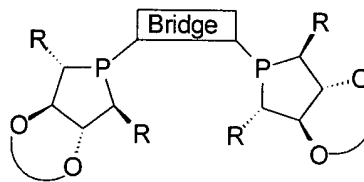
A



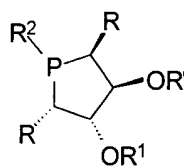
A'



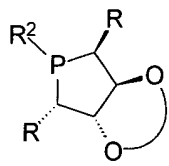
B



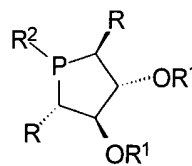
B'



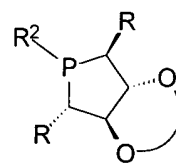
C



D



C'



D'

wherein:

- a) R and R² are independently aryl, alkyl, alkyl aryl, aryl alkyl, or chiral oxazolino which may be substituted with carboxylic acid, alkoxy, hydroxy, alkylthio, thiol or dialkylamino groups;
- b) R¹ can be H, alkyl, silane, aryl, a water soluble unit, or a linked polymer chain or inorganic support; and
- c) Bridge may be:

-(CH₂)_n- where n is an integer ranging from 1 to 8;

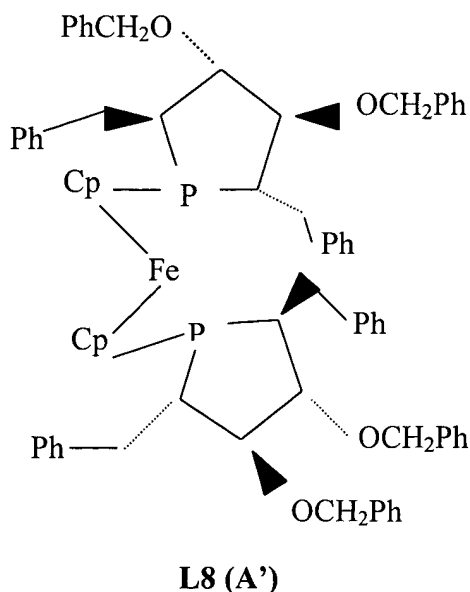
-(CH₂)_nX(CH₂)_m- wherein n and m are each integers, the same or different, ranging from 1 to 8, and X is O, S, NR⁴, PR⁴, AsR⁴, SbR⁴, divalent aryl, divalent fused aryl, divalent 5-membered ring heterocyclic group, or divalent fused heterocyclic group, wherein R⁴ is aryl, alkyl, substituted aryl, or substituted alkyl; or

1,2-divalent phenyl, 2,2'-divalent 1,1'-biphenyl or 2,2'-divalent 1,2'-binaphthyl or ferrocene, each of which may be substituted with aryl, C1-C8 alkyl, F, Cl, Br, I, COOR⁵, SO₃R⁵, PO₃R⁵₂, OR⁵, SR⁵, NR⁵₂, PR⁵₂, AsR⁵₂, or SbR⁵₂;

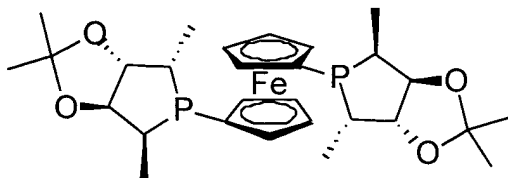
wherein the substitution on 1,2-divalent phenyl, the ferrocene or biaryl bridge can be independently halogen, alkyl, alkoxyl, aryl, aryloxy, nitro, amino, vinyl, substituted vinyl, alkynyl, or sulfonic acids; and

R⁵ is hydrogen, C1-C8 alkyl, C1-C8 fluoroalkyl, or C1-C8 perfluoroalkyl, aryl; substituted aryl; arylalkyl; ring-substituted arylalkyl; or -CR³₂(CR³₂)_qX(CR³₂)_pR¹ wherein q and p are integers, the same or different, ranging from 1 to 8; R³ is aryl, alkyl, substituted aryl, or substituted alkyl; and X is as defined above.

34. (Amended) A catalyst according to claim 23, wherein [the transition metal complex is derived from a] said chiral compound is represented by [of] the following formula [or its enantiomer]:



35. (Amended) A catalyst according to claim 23, wherein [the transition metal complex is derived from a] said chiral compound is represented by [of] the following formula [or its enantiomer]:



24 f-ketalPhos